

REMARKS

Claims 13, 20 and 22-29 are pending in the application. Claims 13, 22, 24, and 26-29 are rejected. Claims 20, 23, and 25 have been withdrawn. Claims 13 and 27 have been amended herein. No new matter has been added.

35 U.S.C. §112, second paragraph rejection

The present office action states that Claim 27 is rejected as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

More specifically, Claims 27 is rejected because "...it is unclear if the phrase "a flange" (lines 1-2) is referring to the previous recitation of "a flange" (line 3 of Claim 13). How many flanges are there? The examiner presumes that both recitations are referring to the same flange". Present Office Action mailed October 31, 2007 (hereinafter referred to as present Office Action), Page 3, Section 7.

Claim 27 has been amended to reflect a flange as being the same flange referred to in Claim 13. This amendment is supported at least by Figure 3. In view of this amendment, Applicants respectfully assert that Claim 27 overcomes the 35 U.S.C. §112, second paragraph rejection. As such, allowance of Claim 7 is respectfully solicited.

35 U.S.C. §103 Rejections

Claims 13, 22, 24, 26, 27, and 28

Claims 13, 22, 24, 26, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of the AAPA in view of Muraki et al. (the present Office Action does not give a citation to Muraki et al.) (hereinafter, Muraki) and further in view of Kitahara et al. (U.S. Patent No. 4,900,958) (hereinafter, Kitahara). The Applicants have reviewed the cited references and the present Office Action's explanation of the cited references and respectfully submit that the present invention as is recited in Claims 13, 22, 24, 26, 27 and 28 is neither shown nor suggested by AAPA in view of Muraki and further in view of Kitahara.

The Examiner is respectfully directed to amended independent Claim 13 which sets forth an embodiment of the present invention:

A method of assembling an actuator arm system for a hard disk drive comprising: positioning a lower bearing on a flange, the lower bearing having an inner race and an outer race, the flange supports the inner race in an axial direction relative to a shaft and the flange is in direct contact with the inner race, and wherein the lower bearing and an upper bearing are positioned on the same side of the flange;

placing an actuator arm on the outer race of the lower bearing wherein the actuator arm is in contact with the outer race of the lower bearing;

placing the upper bearing on the shaft, the upper bearing having an inner race and an outer race;

applying an adhesive between the inner race of the upper bearing and the shaft;

applying an axial preload force to the inner race of the upper bearing;

curing the adhesive; and

releasing the preload force.

(Emphasis added) Support for this amendment is found at least on Figure 3 of the application, showing a lower bearing 44 and upper bearing 46 positioned on the same

side as flange 41. Additionally, Figure 3 shows that the inner race 48 of lower bearing 44 is in direct contact with flange 41. Claims 22, 24, 26, 27, and 28 depend from Claim 13 and recite further limitations of the claimed invention.

“As reiterated by the Supreme Court in *KSR*, the framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). Obviousness is a question of law based on underlying factual inquiries” including “[a]scertaining the differences between the claimed invention and the prior art” (MPEP 2141(II)). “In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious” (emphasis in original; MPEP 2141.02(I)). Appellants note that “[t]he prior art reference (or references when combined) need not teach or suggest all the claim limitations, however, Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art” (emphasis added; MPEP 2141[III]).

As presented above, Applicants respectfully submit that Applicants’ invention as a whole is not obvious over AAPA, in view of Muraki, and further in view of Kitahara. Additionally, the present Office Action does not explain why the differences between AAPA, Muraki, and Kitahara and Appellants’ invention would have been obvious to one of ordinary skill in the art.

AAPA, Muraki, and Kitahara remain silent as to “positioning a lower bearing on a flange, the lower bearing having an inner race and an outer race, the flange supports the inner race in an axial direction relative to a shaft and the flange is in direct contact with the inner race, and wherein the lower bearing and an upper bearing are positioned on the same side of the flange”, as is recited in Applicants’ Claim 1. Emphasis added.

AAPA in combination with Muraki and Kitahara do not render obvious “positioning a lower bearing on a flange, the lower bearing having an inner race and an outer race, the flange supports the inner race in an axial direction relative to a shaft and the flange is in direct contact with the inner race, and wherein the lower bearing and an upper bearing are positioned on the same side of the flange” as is recited in Claim 13 (and similar limitations of Claims 22 24, 26, 27, and 28). By contrast, AAPA merely discloses a flange that separates the upper bearing 26 and the lower bearing 24. Muraki discloses an “actuator arm … in direct contact with the outer race of the lower bearing”. Present Office Action, page 4, 3rd full paragraph. Kitahara merely discloses bearings 56 and 61 to be vertically positioned on top of armature 5. Kitahara, Figure 7. Nothing in the AAPA, Muraki, or Kitahara suggests a lower bearing and an upper bearing to be positioned on the same side of the flange, as well as the flange being in direct contact with an inner race.

Furthermore, the cited prior art teaches away from Claim 13 of Applicants’ invention. For example, AAPA teaches away from Applicants’ present invention in that the AAPA teaches a lower bearing and an upper bearing separated by a flange. Muraki teaches away from Applicants’ invention in that Muraki teaches an outer race of a lower

bearing being in direct contact with an actuator arm, not an inner race as in Applicants' invention. Kitahara teaches away from Applicants' invention in that Kitahara teaches a flange which is positioned away and separate from upper and lower bearings. Additionally, other components are positioned between the flange and the bearings.

Consequently, the Applicants respectfully submit that AAPA alone or in combination with Muraki and Kitahara does not render obvious the present claimed invention as set forth in Claims 13, and as such, Claim 13 is in condition for allowance. Moreover, Claims 22, 24, 26, 27, and 28 are in condition for allowance as being dependent upon an allowable base claim.

Claim 29

Claim 29 is rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of AAPA, Muraki, Kitahara, and further in view of Sakuragi (U.S. Pat. No. 5,949,165). However, Sakuragi does not overcome the deficiencies of AAPA, Muraki, or Kitahara. Sakuragi fails to disclose "positioning a lower bearing on a flange, the lower bearing having an inner race and an outer race, the flange supports the inner race in an axial direction relative to a shaft and the flange is in direct contact with the inner race, and wherein the lower bearing and an upper bearing are positioned on the same side of the flange", as recited in Claim 13. Consequently, Applicants respectfully submit that AAPA in view of Muraki, Kitahara, and Sakuragi does not render obvious the present claimed invention as set forth in Claim 26 and is in condition for allowance.

CONCLUSION

In light of the above amendments, remarks, and arguments presented above, Applicants respectfully assert that Claims 13, 22, 24, 26, 27, 28, and 29 overcome the rejections of record and, therefore, Applicants respectfully solicit allowance of these claims.

The Examiner is invited to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

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Respectfully submitted,
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